Statistics Standards

These may change as the year progresses.

**Unit: The basics of Statistics**

**S1. Analyze articles from newspapers and magazines.**

See handouts (ex. Hamilton, S2/S3 Display, NBA, mathletics/freakonomics, hot hand, polls, race study, etc)

**S2. Identify, create, and interpret categorical displays**

pg 16 1-4, 13, 15, 17

Pg 38 6-8 (Don’t skip sentences), 16

pg 40 19, 22, 25, 28

**S3. Identify, create, and interpret quantitative displays**

pg 76 Make histograms for the following: 36, 38

Comment on 39, 40, 45 but don’t make a new one

Pg 75 35, 36a

**S4. Describe the shape of data and appropriate summary statistics**

Pg 72 7, 13, 14, 32

pg 72 9, 10, 12, 13, 17, 33

Pg 72 15a, b, 17, 19, 23, 25

Pg 96 12, 23, 26

**S5. Solve problems using the Standard Bell Curve**

Worksheet

Pg131 25-30

pg 130 11-13, 16

pg 132 31, 35, 37, 38

Pg 130 17, 39-43, 46

Pg 129 3, 4, 19, 20

**Unit: Sampling, Experiments, and Studies**

**S6. Name different sampling methods and bias or sampling variability that could result**

Hmwk: Pg 289 7-11, 15, 17, 18

**S7. Describe the difference between a population and sample AND describe the difference between an observational study and experiment**

Pg 312 1, 4, 7-10 (just name type in 7-10)

**Unit: Use regression to find trends**

**S9. Describe how equations/ideas related to correlation are derived**

handout and ideas from Ch7-9

**S10. Evaluate a scatterplot and describe correlation**

pg 164 3, 5, 6, 8

Pg 164 11, 12, 15, 20, 23, 33, 35, 36

**S11. Describe how to find the line of best fit, apply it, and interpret it**

pg 192 1, 3, 5, 11, 14, 15, 17, 21, 22, 26, 27, 31, 37, 41, 43, 45 skip d 49

Pg 216 10, 17, 21, 31

**Unit: Probability**

**S12. Solve probability questions using the addition and multiplication rules**

Pg 339 5, 8, 11, 13, 25, 31a, 32a

Pg 339 15, 16, 31b, 32b, 33, 35, 36, 40

Pg 361 1-4

**S13. Solve probability questions using conditional probabilities**

Pg 362 5-13

Pg 362 15-18, 21, 22, 27, 28

Pg 365 42-44

**S14. Solve problems using combinatorics**

Worksheet

Lottery and card hands

**Unit: Probability Models**

**S15. Find expected value and standard deviation**

pg 383 1-2

pg 383 15a, 16a, 3, 5

pg 383 15b, 16b, 18, 21, 22

pg 383 10, 11, 13, 35, 36

**S16. Evaluate geometric and binomial models**

Pg 401 1, 8, 9, 11

Pg 401 17a,d 18 a,d, 19a,b

Pg 401 15, 17-23, 25

**S17. Set up and evaluate problems that use the Central Limit Theorem**

pg 428 5, 7, 9, 11, 15, 16

pg 436 33, 37, 39, 45, 47

**Unit: Confidence Intervals and Hypothesis Testing**

**S18. Use and identify proper notation**

Mean, Standard Deviation, Proportion, Tests

**S19. Set up and evaluate confidence intervals and margin of error**

pg 455 1, 5, 9, 13, 17, 20, 23

Pg 455 7, 8, 28, 29, 30

Pg 554 9, 10, 12, 14, 19, 20

pg 554 1 a,b, 2 a,b, 11, 31, 32, 35, 36

Pg 580 7, 9, 12, 13, 19, 27, 36

**S20. Identify and write Type I and Type II errors**

Pg 501 19-22 (a-c on all of them)

**S21. Set up and evaluate hypothesis testing using proportions and large means**

Pg 476 1 and pg 499 1

pg 477 10, 19, 21, 22, 24 (If not stated, use 95%)

pg 477 9, 10, 19, 21, 22, 24 (If not stated, use 95%) Just get the p-values

Also do 17, 18 all the way

Pg 500 9, 12

Pg 557 29, 30 (use 95%), do steps + find p-value

**S22. Identify and use technology to solve small mean, two proportion, two means, and chi-square hypothesis testing**

Pg 556 34, 35, 38

Pg 519 1, 5, 9, 14, 16-18, 25

Pg 580 7, 9, 12, 13, 19, 27, 36

pg 643 3, 4, 5, 6, 10 + ws examples

**S23. Identify key text in readings**

Read the book!

**S24. Conduct a statistical study with proper techniques**

See handout

**S25. Report findings from a statistical study**

See handout